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The Role of Leadership and Culture in Creating Meaningful Assessment: A Mixed Methods Case Study

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Abstract

With increased demands for institutional accountability and improved student learning, involvement in assessment has become a fundamental role of higher education faculty (Rhodes, 2010). However, faculty members and administrators often question whether assessment efforts do indeed improve student learning (Hutchings, 2010). This mixed methods case study of a faculty inquiry project explored how factors linked to organizational context (Kezar, 2013) are related to commitment to assessment and to use of assessment data by faculty members. Results indicated key best practices, such as developing faculty leaders and communities of practice to exchange ideas. The study provides insights for institutional administrators and faculty members seeking to develop a culture of assessment.

Keywords: Organizational culture, Assessment, Faculty leadership, Mixed methods

External pressures calling for institutional accountability and internal demands to improve student learning make involvement in assessment a fundamental role of higher education faculty members in the 21st century (e.g., Rhodes, 2010; Walvoord, 2010). Yet effective practices and policies to accomplish these goals remain elusive, leading some faculty members and administrators to question whether the effort invested pays off in improved student learning (Hutchings, 2010; Hutchings et al., 2012).

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Recognizing that scholars have attempted to identify best practices and measure the value added by assessment activities, Kezar (2013) argued that a lack of research about culture, leadership, and organizational policies related to student learning outcomes assessment results in a superficial understanding of the efficacy of the work. In particular, Kezar cited the difficulty of defining culture and leadership and a lack of theory connected to organizational policies as problematic. Others have made similar observations about the complexity of processes and practices surrounding the use of assessment data to improve student learning (e.g., Hutchings et al., 2012; Peterson and Einarson, 2001; Rhodes, 2010).

Our study addressed Kezar's concerns about previous research focused on the impact of assessment and expands our understanding about how faculty members use assessment data. In short, considering what is known about leadership and the culture of higher education, what are the best ways to organize assessment efforts to improve students' learning? These questions were investigated in the context of the "ACE 10 Faculty Inquiry Project" at our institution, which engaged instructors in focused conversations about implementing and assessing student learning outcomes for capstone courses. Achievement-Centered Education (ACE) is a general education program built around ten student learning outcomes (University of Nebraska-Lincoln, 2014). The ACE 10 outcome asks students to "generate a creative or scholarly product that requires broad knowledge, appropriate technical proficiency, information collection, synthesis, interpretation, presentation, and reflection." The project involved twenty-six faculty leaders from various departments and disciplines in all eight undergraduate colleges of the University of Nebraska Lincoln, and they met monthly throughout academic year 2013-2014 to share best practices for assessing ACE 10 courses. This project was developed to help the faculty focus on improving learning rather than the process of submitting assessment reports and complying with institutional requests. Administrators hoped that the effort would result in an increased capacity to produce meaningful assessment and that the faculty leaders in the project could and would help others in their colleges.

Relevant Selected Literature

The search to identify best assessment practices is complicated by the widely-varying organizational context for institutions, each with a different organizational structure and mission. Assessment is needed for different purposes (accountability to various stakeholders and improvement at different levels – course, department, college, institution). The faculty and administrators use information from assessment for different purposes (e.g., general education, professional and regional accreditation, and accountability to external stakeholders). Thus, there are significant challenges involved with measuring the impact of assessment and identifying effective practices.

While much assessment literature focused on improving learning in courses, some scholars have argued that focusing on using assessment data for course improvement is too narrow (Jonson et al., 2014). Jonson et al. proposed a model based on a content analysis of narrative assessment reports, which recognizes the multidimensional, integrated ways that assessment evidence can be used to improve programs as well as teaching approaches for specific courses. In other words, assessment can generate several types of influences on student learning, such as insights that evolve about the process of conducting assessment itself, confirmation that students are making progress toward achieving the desired learning outcomes, or something in the course or program that needs to be altered to provide a better learning opportunity including developing communities of practice or gaining

financial support. We argue that thinking about the influence of assessment in this broader sense offers a better lens through which we can judge the value of the efforts and address the concerns Kezar articulated about the impact of leadership, culture, and organizational policies on assessment.

The Role of Leadership and Culture

Academic leadership matters especially when it involves asking faculty members to add more to their already full plates. Kezar (2013) summarized existing literature on the leadership of assessment efforts and suggested that leadership has been defined too narrowly in that studies have focused on the person of authority or faculty ownership. She argued that focusing on support from senior administrators to gain faculty buy-in reduces the insights that could be gained with a richer, fuller definition of leadership. Kezar observed the importance in the existing literature of faculty leadership in implementing assessment programs and of including faculty members as a critical component of leadership. The involvement of faculty leaders in assessment design and implementation facilitates acceptance by their colleagues (Palomba, 2001). Furthermore, if faculty members lack a sense of ownership and do not collect the data themselves, they are not likely to use that data to produce meaningful change (Banta, 1997 as cited in Kezar, 2013).

Recognizing that a lack of faculty support is a significant barrier in implementing assessment, we speculate that the roles of both senior administrators and faculty leaders are integral to successful assessment practices. While senior administrators articulate vision and determine direction, support from faculty leaders is equally critical. Efforts led only by administrators are likely doomed. Kezar's (2013) definition of leadership captures the possibility of this broader conceptualization: "...individuals and groups that help provide direction and work toward assessment implementation [and] processes that they use (e.g., vision, asking key questions, reiterating commitment)" (p. 198).

Investigations of the value of assessment are also hindered by the lack of a clear consensus about what culture means. Kezar (2013) claimed in her survey of relevant literature that, unlike the definitions of leadership in assessment studies that tend to be too narrowly focused, culture is too broadly defined. Definitions range from "values, beliefs, and norms of a group of people or organization" (Schein, 1985 as cited in Kezar, 2013) to a more general/generic interpretation where the term was not defined in some studies but rather referred to as "faculty culture of assessment" or "cultural practices." For the purpose of this study, we used Kezar's (2013) revised definition of culture: "...the underlying meaning system of an organization (mission, values, norms underlying assumptions) and how it may or may not support assessment, [including] cultural processes that can be invoked to support assessment like faculty socialization, campus dialog" (p. 198).

The lack of consensus about what culture means has resulted in research that goes in several different directions, which fall into two broad categories: examining assessment culture as an outcome that can affect acceptance or as a process for improvement (Kezar, 2013). Studies related to changing culture are based on an assumption that we can implement assessment successfully if we change the culture. Some studies in this category investigated the characteristics of culture, such as trust or collegiality. Kezar criticized this body of research because these investigations are largely self-report, single case studies that do not compare cultures empirically. Scholars who studied culture as process looked at how strategies transform the organization and support as-

assessment; but these, too, are based mostly on descriptive, single case studies and suffer from a lack of comparison to other types of cultures, making it hard to attribute effects to culture.

Some researchers have focused on a particular aspect of assessment culture, specifically developing the faculty's ability to engage in assessment. Assuming that better assessment occurs when faculty members have the ability to make more informed decisions about student learning, some have proposed that a supportive environment is a prerequisite for quality assessment. One study identified a key resource, i.e., the opportunity to consult with someone about assessment, as the most cited reason for improved assessment (Rodgers et al., 2012). Our study drew upon this work and looked at the connection between a particular instructional development practice and its impact on faculty members' perceptions of the organizational characteristics of a culture that supports assessment.

Learning from Kezar's observations, we adopted a comparative approach and focused on the idea of investigating whether aspects of administrative and faculty leadership have an impact on the culture of assessment as defined by Kezar. This investigation fills a need in the literature that Kezar identified: it is an empirical investigation of the aspects of culture when viewed as an outcome (by changing culture we can improve assessment) and as a process (practices that change culture and thus improve assessment).

Organizational Policies

Kezar argued that scholars should study the influence of culture, leadership, and organizational policies that shape assessment practices and policies in order to gain a better understanding about the conditions under which assessment can result in improved learning. Organizing for assessment requires many decisions. Basing practices on recommendations from previous scholars, assessment should involve administrative and faculty leadership if one goal is to increase faculty ownership of the process (Kezar, 2013). The promise of assessment lies in deepening faculty involvement (Hutchings, 2010). Ndoye and Parker summarized other practices that foster buy-in and concluded that "institutions with a culture of assessment tend to focus on student learning rather than accreditation, the usage of locally developed instruments, and regular communication through means such as workshops" (2010, p. 38).

A key to making the work meaningful lies in faculty involvement in making sense of the activity. Instructors' ability to ask and find answers to questions that matter gives them a good reason to participate (Blankenship et al., 2011). In contrast with assessment that yields general information about the institution, program level approaches that involve instructors produce information useful for improving student learning and effectively closing the assessment loop (Jonson & Thompson, 2013).

Re-conceptualizing leadership of one individual to leadership involving multiple leaders representing various levels of an environment offers an opportunity to imagine how leaders define elements of their work (Spillane et al., 2001). In the context of assessment, sense-making theory (Dervin, 1999) suggested that faculty members who participate in determining which questions they want to answer regarding student learning will use the information because it is relevant to their needs (Hutchings, 2010; Jonson & Thompson, 2013). Applying lessons from sense-making theory also addresses Kezar's criticism about the lack of theory-driven policies and structures that connect to leadership and culture. Organizational features of assessment such as incremental planning, on-going assessment, examining best practices, and encouraging broad participation appear to help faculty

members make sense of what they are doing (Peterson et al., 1999). Still, Kezar called for more in-depth understanding of concepts that shape assessment efforts positively, such as asking how different disciplines address assessment and what faculty members can learn from each other. We asked how these activities relate to other characteristics of leadership and culture. Hutchings (2010) recommended strategies for increasing faculty involvement in assessment including making a place for assessment in faculty development, reframing the work of assessment as scholarship, and creating occasions for constructive assessment conversation and action. Our study tested those strategies empirically.

The Study

Purpose

Through this study, we explored institutional organization for assessment using a mixed methods case study design (Creswell and Plano Clark, 2011; Yin, 2014). The case was bound as the year-long ACE 10 Faculty Inquiry Project focused on the assessment of the outcome related to integrated learning. The project took place during the 2013-2014 academic year. To achieve the purpose of exploring how faculty members use assessment data and what factors contribute to meaningful assessment practices, a central research question guided the study. How does the institution's organization for assessment affect faculty members and their efforts to assess student learning outcomes? Three sub-questions provided further guidance:

- a. Quantitative: What is the relationship of leadership; culture; and organizational policies, practices, and structures to faculty buy-in and implementation of student learning outcomes assessment?
- b. Qualitative: What are the best practices that encourage faculty members to use assessment data?
- c. Mixed Methods: What results emerge from comparing the qualitative process findings with the results of the instruments that examined organizational context, knowledge about assessment, and the implementation of assessment?

The researchers had obtained Institutional Review Board approval for this study and participants' consent.

Method

We employed a convergent parallel mixed methods case study design. Mixed methods research involves the collection, analysis, and integration of both quantitative and qualitative data (Creswell and Plano Clark, 2011). Following this design, we gathered data through quantitative instruments and qualitative text. The source of quantitative data was three surveys that examined organizational context, and the source of qualitative data was faculty assessment products and comments that explored the faculty assessment processes. The rationale for a mixed methods design is that the organization and process of assessment occurred in a more complex and nuanced manner than existing instruments could detect. The integration of qualitative data with the instrument results led to a more complete understanding (Greene et al., 1989) of best practices for organizing assessment. By integrated the results of each strand, we gained a better understanding of how organizational context relates to faculty buy-in and use of assessment data.

Participants

Administrators selected 26 faculty leaders, who teach a general education course focused on integrating learning, to participate in the ACE 10 Faculty Inquiry Project, which served as the case. This group represented all eight undergraduate colleges of the University, and the members received professional development funds as an incentive to participation. The courses serve as capstone experiences that require students to “generate a creative or scholarly product that requires broad knowledge, appropriate technical proficiency, information collection, synthesis, interpretation, presentation” (University of Nebraska-Lincoln, 2014).

Quantitative Instruments and Analysis

Participants received an invitation to complete three online instruments during the first meeting of the program. Approximately nine months later, at the time of the final program meeting, the participants received a link to the post-workshop instruments. We provided up to three reminder emails at each time point to improve response rates. The response rate for completion of both the pre- and post- instruments was 70%.

We administered three separate instruments, each with a different focus. Table 1 illustrates how the instruments align with Kezar’s synthesis of organizational factors. The instruments were the Assessment Attitudes and Knowledge Survey, the Information Characteristics Survey, and the Organizational Characteristics Survey. The assessment attitudes and knowledge survey (see Table 2) consisted of background information and three scales that measure personal disposition about assessment, participants’ perceptions of institutional encouragement of faculty use and engagement, and knowledge about assessment and use.

We conducted an exploratory factor analysis. The results revealed evidence of simple structure with factor loadings ranging from .383 to .865 and only one item with moderate cross-loading. Scale internal-consistency reliability analysis yielded coefficient alphas of .919 (personal dispositions), .805 (institutional encouragement), and .881 (knowledge). The information characteristics survey measured characteristics of assessment data used

Table 1 Mapping Organizational Factors (Kezar, 2013) to Data Collection

Organizational Factors (Kezar, 2013)	Data Sources
Leadership	
Longevity and stability	—
Multilevel leadership	Organizational characteristics survey
Culture	
Values	Personal characteristics (institutional encouragement scale)
Assessment included in mission	Qualitative reports and posters
Assessment integrated into campus processes to demonstrate value	Information characteristics (action orientation)
Organizational policies, practices, and structures	
Professional development	Organizational characteristics survey, Personal characteristics (knowledge about assessment and use scale)
Appropriate data systems	Information characteristics (Assessment Quality)
Type of assessment: ongoing and pilots	Qualitative reports and posters
Rewards	Organizational characteristics survey

Table 2 Items of the Assessment Attitudes and Knowledge Survey

Item
Knowledge About Assessment and Use
How knowledgeable are you about the
Purpose of outcomes assessment?
Methods of outcomes assessment?
Institution's general education program?
General education learning outcome(s)?
Specific learning objective addressed in this project?
To what extent have you incorporated the following into your work?
Systematically collecting information about the effectiveness of your teaching beyond end-of-term course evaluations
Using assessment findings to inform changes made to your courses
Personal Disposition About Assessment
Beliefs about assessment: Indicate the extent to which you agree with the following statements.
Assessment is primarily about improving student learning.
Initiating a process for outcomes assessment would enhance the stature of our department/program/university.
Outcomes assessment would pave the way for better programs for our students.
Please describe how you feel about the following statements regarding student assessment at your institution.
Students today are learning more due to an institutional focus on the assessment of student learning.
Student assessment has improved the quality of education at this institution.
Faculty members use student assessment information to modify how or what they teach.
Assessing students has resulted in the development of learning experiences that better meet diverse learning styles.
The effectiveness of teaching is enhanced when faculty regularly engage in student assessment.
Student assessment techniques accurately measure students learning.
In your opinion how useful is assessment of student learning in informing the following insights
Improve program or practice
Influence thinking rather than action
Determine the overall worth or merit of a program
Mobilize support and legitimate a position
How effectively does the University disseminate the findings of its assessment efforts to faculty?
In general, how useful to you are the findings from the University's assessment efforts?
Institutional Encouragement of Faculty Use and Engagement
To what extent is evidence gathered by faculty members in their courses used to inform the following?
Institutional activities aimed at improving teaching and learning
Your department's activities aimed at improving teaching and learning
To what extent are faculty members at the University encouraged to do the following?
Systematically collect information about the effectiveness of their teaching beyond end-of-term course evaluations
Use assessment findings to inform changes made to their courses
Publicly present (e.g., lectures or workshops) information about teaching or learning
Publish on teaching and learning
Collaborate with colleagues on improving teaching and learning
To what extent have you incorporated the following into your work?
Publicly presenting (e.g., lectures or workshops) information about teaching or learning
Publishing on teaching and learning

Note: five-point scale with higher numbers indicating higher agreement

for decision-making, and it was adapted from an earlier survey developed for the field of evaluation to measure research characteristics (Weiss & Bucuvalas, 1980). The adaptations included several new items and language rephrasing aligned with assessment activities. The confirmatory factor analysis we conducted yielded three factors: Action Orientation, Compatibility with Expectations, and Assessment Quality. The factor loadings ranged from .573 to .845 in the final set of 15 items (see Table 3). Reliability coefficient alphas for the scales were .86 (action orientation), .69 (compatibility with expectations), and .86 (assessment quality). The third instrument, organizational characteristics, was adapted with permission from the Inventory of Institutional Support for Student Assessment by Peterson, Einarson, Augustine, and Vaughan (1999), who reported items factor loadings ranging from .49 to .90 and coefficient alpha internal consistency reliability ranging from .61 to .84. Thus, the instruments have demonstrated evidence of validity and reliability.

We began the quantitative analysis with descriptive analysis of means and frequencies to compare the two sets of results. Significance testing at the .05 alpha level then consisted of repeated measures analysis of variance (ANOVA) to compare pre-post changes in each of the instrument scales. The ANOVA procedure examined whether changes in time were statistically significant.

Qualitative Data and Analysis

We collected qualitative data from three sources: faculty responses to open-ended survey items, open-ended narrative responses, and the series of posters developed by the participants in the Project. Open-ended survey items solicited general feedback on the workshop

Table 3 Items of the Information Characteristics Survey

Item
Action Orientation
Adds to practical knowledge about policies and programs
Analyzes the effects of factors that decisions makers can do something about
Contains explicit recommendations
Findings can be applied within existing agencies and programs
On time for a pending decision
Compatibility with Expectations
Challenges existing assumptions and institutional or programmatic arrangements
Raises new issues or offers new perspectives
Compatible with the ideas and values of potential users
Supports a position already held by the user(s)
Consistent with a body of previous knowledge
Assessment Quality
Adds to descriptive, causal or theoretical knowledge about policies and programs
Recommendations are supported by the data
Comprehensive (e.g. includes most of the potentially explanatory variables in the analysis)
Findings are internally consistent and unambiguous
Objective, unbiased

Note: five-point scale with higher numbers indicating higher agreement

and use of data. In addition, we conducted a brief follow-up survey at the conclusion of the project to solicit narrative responses concerning the process of assessment. The survey consisted of open-ended items about the questions about student learning that faculty members had investigated, key findings, changes suggested by findings, the individuals involved in the assessment process, how results were shared, and how the faculty members developed assessment skills. Finally, the posters were the end product of the ACE 10 Faculty Inquiry Project. Through these posters, participants shared their process and findings in assessing their capstone courses.

All text data were imported and analyzed in MAXQDA (Verbi GmbH, 2014), a qualitative analysis application. Following a thematic text analysis approach, we read the data several times to code and develop general themes (Kuckartz, 2014). The focus of the analysis was on the best practices that encourage faculty use of assessment data. A secondary focus was to understand participants’ experiences with the ACE 10 Faculty Inquiry Project. The purpose of adding this second focus was evaluative – to understand what worked well and what did not.

Results

Quantitative Results

Assessment Attitudes and Knowledge and Information Characteristics surveys The results demonstrated improved ratings of assessment attitudes and knowledge and information characteristics from pre-program to post-program. Table 4 provides a summary of mean scale scores from these two instruments. The rating of personal knowledge about assessment improved from pre- to post- by 0.5 ($F(1, 12)=7.74, p=.017$). Faculty members gained a more realistic understanding of the extent to which they used data beyond pedagogy in a course. For example, they may have used data to rethink the sequence of courses within a major. After completing the program, faculty members better understood the value of evidence-based decision making to improve student learning. Within this knowledge scale, the biggest change was present in items concerning knowledge of general education learning outcomes, the institution’s general education program, and specific learning objectives addressed by the capstone course. In addition, personal dispositions about assessment improved over time ($F(1, 12)=5.96, p=.035$) when controlling for pretest

Table 4 Mean Personal Characteristics and Information Characteristics Scale Scores

Scale	Pre		Post		F	P
	Mean	SD	Mean	SD		
Knowledge About Assessment and Use	3.46	.68	3.92	.49	7.74	.017
Personal Disposition About Assessment	3.73	.60	3.87	.41	5.96	.035
Institutional Encouragement of Faculty Use and Engagement	2.30	.69	2.52	.63	2.04	-
Action Orientation	3.18	.79	3.44	.98	1.32	-
Compatibility with Expectations	3.10	.70	3.30	.97	0.78	-
Assessment Quality	2.95	.75	3.16	.90	1.24	-

Note: Five point scale for items. Nonsignificant *p* values not reported

ratings of knowledge and institutional encouragement. The observed improvement for the remaining four factors did not reach statistical significance.

Organizational Characteristics survey Our analysis of the organizational characteristics survey focused on the intended purpose of assessment, leadership support of assessment activities, faculty rewards for assessment, and academic planning and review. First, we examined the intended purposes of assessment. Meeting institutional expectations ($M=3.43$) and improving achievement of undergraduates ($M=3.43$) were rated as most important preprogram. Although the difference was not statistically significant, the purposes rated most important post-program were preparing for self-study accreditation ($M=3.36$) and meeting institutional expectations ($M=3.73$). However, a change was evident over time when looking broadly at the external versus internal purposes of assessment efforts. Specifically, upon completion of the ACE 10 Faculty Inquiry Project, participants rated the importance of external purposes for assessment significantly higher in importance than pre-workshop ($t(10)=3.304$, $p=.008$). Thus, they became aware of various reasons for conducting assessment. In addition to the connection to regional accreditation for the institution and professional accreditation for their programs, faculty members connected their own inquiry with useful, pragmatic assessment.

Second, a set of items focused on the degree to which various groups within the institution support ACE assessment (Table 5). At both time points, support from college-level administration was rated highest and student support rated lowest. Faculty support was rated lower than all types of leadership support; and, interestingly, no correlation exists between ratings of faculty and administrative, i.e., chairs, deans, associate deans, institutional administrators, support for assessment. This result is consistent with Kezar's (2013) argument that focusing on administrative leadership alone is too narrow to affect assessment efforts. Changes from pre to post were not significant. Next, we examined professional development activities and faculty rewards. About 55 % of the participants reported that professional development opportunities were available including funds to attend conferences on assessment, workshops for the faculty and chairs, and reference materials. Only about a quarter of them (27 %) reported that assessment counted toward tenure review. Overall, this set of results indicates a topic appropriate for institutional discussion.

Finally, a set of items focused on how ACE assessment had been incorporated into academic planning and review. An increase from pre to post was evident in the incorporation

Table 5 The Degree to Which Various Groups Support Assessment Activities

Scale	Pre		Post	
	Mean	SD	Mean	SD
Institutional Administration	3.85	1.53	4.09	0.94
College-level Administration	4.10	1.47	4.20	1.40
Department-level Administration	3.90	1.45	4.05	1.01
Faculty	3.81	1.01	3.59	0.89
Staff	3.38	1.30	3.38	0.92
Students	3.25	0.61	3.08	0.20

Note: Five point scale from Very Unsupportive (1) to Very Supportive (5)

of assessment into general education/core curriculum review (57 % pre to 67 % post either incorporated or planned to) and course level review and development (71 % pre to 80 % post incorporated or planned to). The small set of complete responses did not yield enough power for testing.

Qualitative Findings

Overall, through the qualitative analysis of the ACE 10 Faculty Inquiry Project we gained a better understanding of how faculty members assess a capstone course. Three themes emerged from the analysis: the process of assessment, the use of assessment evidence, and faculty experiences through program.

Process of assessment Characteristics of the process of assessment included the collection and analysis of evidence as well as the sharing of findings. Some participants found value in forming a team to assess samples of student work using a common rubric. An alternate approach was for individual faculty members to evaluate work and feed the results into the course assessment. We identified a best practice based on successes reported by participants. The practice involved using a team to present assessment results to the department to generate a discussion. The structure consisted of a team or a set of committees (e.g., faculty review, curriculum committee, program chair, and ACE 10 faculty review). One department described how it was organized: "Individuals or committees in the department may take action to improve teaching and learning or revise curricula." It rests on the notion that a team will yield increased use of findings to make instrumental changes, such as pedagogical revisions, to the course. Because of successes reported among departments, at the conclusion of the project we recommended that colleges adopt a team-based approach to assessment and use faculty leaders who had participated in the ACE 10 Faculty Inquiry Project.

Use of assessment evidence Capstone courses across disciplines, from music to history to mathematics, sought to design assessment strategies that would generate findings to improve the "synthesis of broad knowledge." A key finding is that, when the faculty members examine assessment evidence more broadly than just for the purposes of meeting institutional or accreditation expectations, they will be open to additional uses of evidence and to exploring alternate processes. The posters that participants developed through the project revealed a range of ways in which they used assessment evidence, for example, to investigate the sequencing of content in a capstone course. In a research methods course, one faculty member reported using findings to restructure lecture and laboratory sections of the course and teach material that students can then incorporate into their capstone project. Overall, faculty use of findings was broader than decision-making about a particular course. Although departments used findings to evaluate and determine how to improve teaching, faculty members also used the assessment process to think critically about the relevance of certain student assignments. For example, one department cited plans to "discuss whether the individual student research project is an appropriate and important indicator of what students learn in the major." Other programs found ways to improve the assessment process itself, such as by integrating common rubrics and assessing the intermediate progress of students.

Faculty experiences Faculty participants cited strengths and weaknesses of the Inquiry Project. Although we had anticipated that the participants would learn from their peers, we

were surprised by the degree to which they embraced learning from their colleagues. Participants indicated this aspect of the program was most useful. Working in a group with other participants, both hearing about and sharing assessment practices, resonated well with them. Comments included the value of learning about “methods used by other departments” and “hearing about other ACE 10 courses across campus and talking with other faculty about their strategies for delivering and assessing them.” Others focused on “ideas from other colleagues” such as how to “structure” their assessment of the capstone course. In addition, they received advice from others to create “record-keeping” strategies that were as unobtrusive as possible.” Overall, participants wanted more time to share and discuss with each other, confirming Rodgers et al. (2012) and Ndoye and Parker’s (2010) arguments about the importance of involving faculty leaders to promote assessment buy-in. Talking with other faculty members about “problems with doing assessment” was cited as needed in order to find solutions applicable to their own departments.

Mixed Methods Integration

The integration of quantitative and qualitative data is a key characteristic of mixed methods research (Creswell and Plano Clark, 2011). Consistent with the mixed methods case study design, we merged the quantitative results with the qualitative findings in order to understand the case better. Specifically, we compared the emergent themes (process of assessment, use of assessment evidence, and faculty experiences) with faculty survey responses. The process of integration involved considering the major results in light of qualitative findings. The merged analysis helped us to develop our key insights, which we present in the following discussion section. For instance, the results supported the effectiveness of the project for professional development because personal knowledge about assessment improved from pre to post. The qualitative data, however, clarified how that knowledge level improved: faculty members stressed the importance of learning about assessment strategies from their peers in addition to the fundamental assessment tasks covered throughout the project. Also, the quantitative results suggested no change from pre to post regarding intuitional encouragement for assessment (i.e., organizational culture and values). Our interpretation of the qualitative data then revealed the contextual nuances, indicating that, when faculty members view assessment beyond the scope of meeting accreditation, they see additional possibilities and learn from the assessment in other ways (e.g., considering the relevance of assignments to outcomes). We engaged in this type of integration throughout our analysis.

Discussion

This Inquiry Project is an example of a learning community focused on assessment that offered the opportunity to examine connections between professional development practice and faculty members’ perceptions of whether or not the organization has the characteristics of a culture that supports assessment. As noted, faculty participants touted the benefits of learning from their peers across the institution. Hearing about how others overcame similar issues and structured their assessment yielded practical ideas and solutions. While it remains important that leadership throughout the institution support assessment, the findings suggested that developing faculty leaders can facilitate organizing an effective assessment system, consistent with Kezar’s (2013) argument that multilevel leadership encourages engagement.

Developing an institutional culture of assessment requires attention to how the institution values assessment as well as how it engages and supports the faculty in the process (Kezar, 2013). Shifting the culture involves broadening the potential influence of assessment beyond satisfying accreditation needs. Findings from the analysis of assessment posters and the existing literature support this argument. This finding is similar to Blankenship, Stenberg, and Wilson's (2013) observation: "We came to wonder, then, whether students might benefit from more shared experiences in their courses; this reminded us that assessment not only answers questions but sparks new ones" (p. 123).

Kezar (2013) also noted that the culture of assessment is reflected in the mission and the integration of assessment into campus processes to demonstrate value. In a large institution, such as ours, it may be necessary for assessment to be part of the mission of each college within the university. Integrating assessment throughout will likely remain a challenge. The Inquiry Project brought faculty together across disciplines and across colleges. Although the project revealed the differences in dispositions about assessment, it also provided an opportunity for faculty members to take what they learned back to their respective colleges. The ten-month duration of the project ensured regular communication and continuing reflection about the work.

Professional development, such as the Inquiry Project, is an important component of organizational policies that promote assessment. Our findings suggest that a series of meetings, particularly when paired with a faculty-peer learning component, can be particularly effective in improving attitudes and knowledge about assessment. The data indicated that a prolonged effort to developing an assessment learning community over time was effective. Although the survey results indicated that the faculty perceived little reward from the University for assessment activities, the qualitative findings suggested that a shift toward intrinsically valuing assessment was occurring. Both discussing and sharing facilitated the shift. This finding underscores the importance of the faculty finding assessment meaningful beyond the demands of external accreditation.

In general, this case study suggested best practices for organizing for assessment. These best practices are based on survey results and qualitative findings in which faculty participants reported successes in conducting meaningful assessment. We identified the following best practices:

- Develop communities of practice among the faculty to exchange ideas.
- Expand the notion of leadership to include faculty leaders as well as administrators.
- Adopt a broader conceptualization of use.
- Situate the definition of culture in the context of the discipline and institution so that assessment is a meaningful process and outcome.
- Focus on improving student learning but also help faculty understand the connection to institutional and professional accreditation efforts.
- Communicate regularly about assessment over a period of time. Faculty members sharing best practices and administrators and faculty members communicating purposes and challenges helps them make sense of the activities of assessment.
- Policy is best determined by the institution in light of the culture and current leadership. Balancing external rewards versus expectations as a faculty member is challenging, but over time faculty members can see the value of assessment.

Conclusion

This study offers a theory-driven, empirical investigation of a process to engage the faculty in assessment. We identified the important role of faculty leaders in the assessment process. Based upon our analysis, we have suggested several best practices that could be easily implemented at other institutions to increase faculty engagement in meaningful assessment. Future research could compare this process to other methods of organizing for assessment and examine the evolution of the culture of assessment.

References

- Blankenship, E., Martens, S., Stenberg, S., & Wilson, D. (2011). Teagle and Spencer final report: Assessing student learning. New York, NY: Teagle/Spencer. Retrieved from <http://assessment.aas.duke.edu/documents/UNLTeagleandSpencerFinalReport.pdf>
- Blankenship, E., Stenberg, S. J., & Wilson, D. E. (2013). Developing a process for assessing general education learning outcomes across a multicollge university. In R. J. Thompson Jr. (Ed.), *Changing the conversation about higher education* (pp. 113–127). Lanham, MD: Rowman & Littlefield.
- Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research* (2nd ed.). Thousand Oaks, CA: Sage.
- Dervin, B. (1999). Chaos, order, and sense-making: A proposed theory for information design. In R. Jacobson (Ed.), *Information design* (pp. 35–57). Cambridge, MA: MIT Press.
- Greene, J. C., Caracelli, V. J., & Graham, W. F. (1989). Toward a conceptual framework for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis*, 11, 255–274. doi:10.3102/01623737011003255
- Hutchings, P. (2010, April). Opening doors to faculty involvement in assessment (NILOA Occasional Paper No. 4). Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment. Retrieved from <http://www.learningoutcomeassessment.org/occasionalpapers.htm>
- Hutchings, P., Ewell, P., & Banta, T. (2012). *AAHE principles of good practice: Aging nicely*. Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment. Retrieved from <http://www.learningoutcomeassessment.org/PrinciplesofAssessment.html#AAHE>
- Jonson, J. L., & Thompson, R. J., Jr. (2013). Assessment approaches and perspectives: Engaging faculty and improving student learning. In R. J. Thompson Jr. (Ed.), *Changing the conversation about higher education* (pp. 95–112). Lanham, MD: Rowman & Littlefield.
- Jonson, J. L., Guetterman, T., & Thompson, R. J. (2014). An integrated model of influence: Use of assessment data in higher education. *Research and Practice in Assessment*, 9(1), 18–30.
- Kezar, A. (2013). Institutionalizing student outcomes assessment: The need for better research to inform practice. *Innovative Higher Education*, 38, 189–206.
- Kuckartz, U. (2014). *Qualitative text analysis: A guide to methods, practice and using software*. London, England: Sage.
- Ndoye, A., & Parker, M. A. (2010). Creating and sustaining a culture of assessment. *Planning for Higher Education*, 38(2), 28–39.
- Palomba, C. A. (2001). Implementing effective assessment. In C. A. Palomba & T. W. Banta (Eds.), *Assessing student competence in accredited disciplines* (pp. 13–28). Sterling, VA: Stylus.

- Peterson, M. W., Einarson, M. K., Augustine, C. H., & Vaughan, D. S. (1999). Institutional support for student assessment: Methodology and results of a national survey. Stanford, CA: Stanford University, National Center for Postsecondary Improvement.
- Peterson, M. W., & Einarson, M. K. (2001). What are colleges doing about student assessment? Does it make a difference? *The Journal of Higher Education*, 72, 629–669.
- Rhodes, T. L. (2010). Assessing outcomes and improving achievement: Tips and tools for using rubrics. Washington, DC: Association of American Colleges and Universities.
- Rodgers, M., Grays, M. P., Fulcher, K. H., & Jurich, D. P. (2012). Improving academic program assessment: A mixed methods study. *Innovative Higher Education*, 38, 383–395.
- Spillane, J. P., Halverson, R., & Diamond, J. B. (2001). Investigating school leadership practice: A distributed perspective. *Educational Researcher*, 30, 23–28.
- University of Nebraska-Lincoln (2014). Achievement centered education. Retrieved from ace.unl.edu
- Verbi GmbH. (2014). MAXQDA (Version 11) [Software]. Available from <http://www.maxqda.com/>
- Walvoord, B. E. (2010). *Assessment clear and simple: A practical guide for institutions, departments, and general education* (2nd ed.). San Francisco, CA: John Wiley.
- Yin, R. K. (2014). *Case study research: Design and methods* (5th ed.). Thousand Oaks, CA: Sage.